OBLON
SPIVAK
MCCLELLAND
MAIER
&
NEUSTADT
P.C.

ATTORNEYS AT LAW

1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314
USA

(703) 413-3000
(703) 413-2220 FACSIMILE

OBLONPAT@OBLON.COM

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

WWW.OBLON.COM

FACSIMILE

PLEASE CALL US AT (703) 413-3000 IF THE MESSAGE YOU RECEIVE IS INCOMPLETE OR NOT LEGIBLE

TO	Examiner John TERESINSKI (NAME)	6/9/04 (DATE)	
	USPTO (COMPANY/FIRM)	571-273-2235 (FAX #)	
	NUMBER OF PAGES INCLUDING COVER: 4	CONFIRM FAX: ■ YES ☐ NO	
FROM	Chien Yuan (NAME)	220445US2X (OUR REFERENCE)	
	703-412-3536 (DIRECT PHONE #)	10/092,993 (YOUR REFERENCE)	

MESSAGE

Please see the attached claim amendments as we discussed.

U.S. Patent Application No. 10/092,993
Attorney Docket No. 220445US

Proposed Claim Amendments

Claim 1 (currently amended): A maximum power point tracking method ~~that supplies~~ for use in a system in which power [[of]] from a direct-current power source, ~~having~~ which has a bow-shaped current-voltage characteristic, is supplied to a load via a switching converter, ~~wherein~~ the method comprising:

performing low frequency, minute modulation of an output voltage of the direct-current power source;

detecting an output current value of ~~said~~ the direct-current power source~~, which undergoes low frequency, minute modulation of input voltage to the switching converter, is detected~~ in a circuit ~~with~~ after performing the modulation, the circuit being configured to perform an amplification factor switching function that switches [[the]] an amplification factor of the circuit between definite magnitudes ~~synchronizing~~ in synchronization with ~~said~~ the performed modulation[[,]] to produce an output; and

controlling said switching converter ~~is controlled~~ using a signal obtained in a discriminator circuit by demodulating the output of [[this]] the discriminator circuit ~~synchronizing~~ in synchronization with ~~said~~ the performed modulation.

Claim 2 (currently amended): The maximum power point tracking method of claim 1, ~~that limits~~ further comprising:

limiting the input voltage of the switching converter to a predetermined range.

Claim 3 (original): The maximum power point tracking method of claim 1, wherein said direct current power source includes at least one of a solar cell, a direct-

current power source that generates power using wind power, and a direct-current power source that generates power using wave power.

Claim 4 (original): The maximum power point tracking method of claim 2, wherein said direct-current power source includes at least one of a solar cell, a direct-current power source that generates power using wind power, and a direct-current power source that generates power using wave power.

Claim 5 (currently amended): A maximum power point tracking device that supplies power of a direct-current power source, which has a bow-shaped current-voltage characteristic, to a load ~~via a switching converter~~, said maximum power point tracking device comprising:

~~(1)~~ a first circuit ~~for performing~~ configured to perform low-frequency, minute modulation ~~that~~ by alternately ~~switches input~~ switching an output voltage of the ~~switching converter~~ direct-current power source between two voltage values;

~~(2)~~ a second circuit ~~that detects~~ configured to detect an output current value of ~~said~~ the direct-current power source and ~~has~~ to perform an amplification factor switching function that switches [[the]] an amplification factor of the second circuit between definite magnitudes ~~synchronizing~~ in synchronization with the modulation ~~in (1) above~~ performed by the first circuit;

~~(3)~~ a ~~discriminator~~ third circuit ~~for obtaining~~ configured to obtain a component ~~synchronized~~ of an output of the second circuit in synchronization with the modulation ~~in~~ ~~(1)~~ performed by the first circuit ~~of output of the circuit in (2)~~; and

~~(4)~~ a fourth circuit ~~that uses~~ configured to use an output of the third circuit ~~in (3)~~ to generate a signal that is ~~also input~~ transmitted to a switching converter control circuit.

Claim 6 (currently amended): The maximum power point tracking device of claim [[4]] 5, further comprising [[a]] the switching converter control circuit ~~that limits,~~ which is configured to limit the input voltage of the switching converter to a predetermined range.

Claim 7 (original): The maximum power point tracking device of claim 5, wherein the direct current power source is at least one of a solar cell, a direct-current power source that generates power using wind power, and a direct-current power source that generates power using wave power.

Claim 8 (original): The maximum power point tracking device of claim 6, wherein the direct current power source is at least one of a solar cell, a direct-current power source that generates power using wind power, and a direct-current power source that generates power using wave power.

I:\ATTY\CHY\220445US\220445 PROP CLMS 08JUN04.DOC